

### **Remarks**

Claims 1-17 and 20-39 are pending. The independent claims are claims 1 and 23.

Claims 4, 8-11, and 29-30 stand withdrawn.

### **Rejection under 35 U.S.C. § 112 and Claim Amendment**

Claim 37 is rejected under 35 U.S.C. § 112, second paragraph as being indefinite, for lack of a proper antecedent for the claim term “the body.” The rejection is traversed as applied to the claim as amended. Claim 37 has been amended to specify that it is the *substrate* that comprises silicon. Claim 37 is therefore clear and definite.

### **Rejection under 35 U.S.C. § 103**

Claims 1-5, 7, 12-17, 22-28, 39 are rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,051,017 to Loeb et al. (“Loeb”) in view of U.S. Patent No. 7,097,775 to Greenberg et al. (“Greenberg”). Claims 6, 8-11, 20, 21, 29-32, and 35 are rejected under 35 U.S.C. § 103(a) as obvious over Loeb in view of Greenberg and further in view of U.S. Patent No. 6,970,741 to Whitehurst et al. (“Whitehurst”). Claims 36 and 37 are rejected under 35 U.S.C. § 103(a) as obvious over Loeb in view of Greenberg and further in view of U.S. Patent No. 7,190,997 to Darvish et al. (“Darvish”). Claim 33 is rejected under 35 U.S.C. § 103(a) as obvious over Loeb in view of Greenberg and further in view of U.S. Patent No. 6,941,171 to Mann et al. (“Mann”). Claim 34 is rejected under 35 U.S.C. § 103(a) as obvious over Loeb in view of Greenberg and further in view of U.S. Patent No. 6,950,707 to Whitehurst et al. (“Whitehurst II”). Claim 38 is rejected under 35 U.S.C. § 103(a) as obvious over Loeb in view of

Greenberg and further in view of U.S. Published Patent Application No. 2004/0082937 to Ausiello et al. ("Aussiello"). The rejections are respectfully traversed.

Greenberg Is Cumulative to Prior Art Already Overcome in Prior Rejections.

All of the rejections rely on Greenberg for its alleged teaching of Applicants' claimed mechanism for reservoir cap disintegration, i.e., electrothermal ablation. Greenberg is no more relevant to mechanism of reservoir cap disintegration than the prior art documents relied on in the numerous previous office actions. The Examiner's attention is directed to the Thompson reference (U.S. 2002/0111601) cited in the Office Action mailed December 2006; to Applicants' Response and the **Rule 132 Declaration** by John T. Santini Jr., Ph.D., filed March 19, 2007; and the Santini '898 patent (U.S. 5,797,898) cited in the Office Actions mailed March 27, 2007; and to Applicants' Response and the **Second Rule 132 Declaration** by John T. Santini Jr., Ph.D., filed September 28, 2007.

Applicants clearly distinguished Thompson and Santini '898, as being technically different and non-obvious. Greenberg is no more relevant. It is merely cumulative. It too fails to teach electrothermal ablation. The present rejections therefore are improper, as detailed below.

Greenberg, Alone or in Combination with Other Cited Art,

Does Not Teach Electrothermal Ablation of a Discrete Reservoir Cap.

Applicants' claimed device requires a means for disintegrating a discrete reservoir cap that is in register with a defined opening of a reservoir in the device. The disintegration must

occur by *electrothermal ablation*. This term, as used by Applicants, is explained at page 14, lines 25-29:

When an effective amount of an **electrical current is applied through the leads and reservoir cap**, the temperature of the reservoir cap is locally increased due to resistive heating, and **the heat generated within the reservoir cap** increases the temperature sufficiently to **cause the reservoir cap to be electrothermally ablated** (i.e., ruptured).

Applicants' discrete reservoir cap separates the reservoir contents from an environment outside of the reservoir until the discrete reservoir cap is electrothermally ablated to uncover an opening in the reservoir. Thus, Applicants' reservoir cap serves as *both* a barrier covering a reservoir opening and, at least briefly during operation, a resistive heater. Greenberg does not teach a structure capable of disintegrating by electrothermal ablation.

In contrast, Greenberg teaches anode electrode reservoir caps (9) that are disintegrated when a current is applied to the electrical conductor (11). The Examiner asserts that "[s]uch a mechanism of cap disintegration is believed to be thermal heating, since current produces heat...[t]hus, the mechanism to ablate the caps is considered to be thru electrothermal means." The Examiner's characterization of Greenberg is technically incorrect.

Greenberg's anode electrode disintegrates when it undergoes a chemical, oxidation, reaction, in the presence of an electrolytic fluid. Greenberg does not describe the disintegration mechanism in any detail—rather it cites and incorporates the teaching of the Santini '898 Patent which has been distinguished ad nauseum in the prosecution of this application. Specifically, Greenberg expressly teaches that its disintegration mechanism is the same as illustrated and described in U.S. Patent No. 6,123,861 to Santini, Jr. (hereinafter, "Santini") (which is a CIP of

the '898 Patent). See Greenberg, Column 2, lines 46-50. As described in Santini (column 19, lines 45-60 and column 12, line 62 to column 13, line 3; see also FIG. 5), a chemical reaction is driven between the cathode and anode – not heat – which causes the anode material to oxidize and then dissolve. Like the Thompson reference, Greenberg incorporates the teachings of the Santini '898 (or '861) Patent and adds nothing new to it with regard to reservoir cap disintegration by heating or other means. See ¶8 of the Second Rule 132 Declaration of John T. Santini Jr. Ph.D. (“Thompson discloses only an *electrochemical* mechanism for causing a cap member to be disintegrated. The **electrochemical mechanism does not involve resistive heating in an amount effective to disintegrate the reservoir cap member.**”). Greenberg therefore would not be construed by one of ordinary skill in the art to teach or suggest electrothermal ablation.

Furthermore, Greenberg does not explicitly describe, suggest, or inherently teach that the reservoir cap is to be ruptured by resistive heating within the reservoir cap. Greenberg also fails to disclose appropriate materials of construction, dimensions of leads and cap materials, or any other design parameters necessary to achieve electrothermal ablation. For instance, there is no recognition that the reservoir cap and the input and output leads should be designed to provide upon the application of electrical current an increase in electrical current density in a reservoir cap relative to the current density in input and output leads.

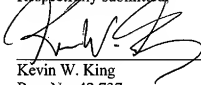
Nothing in Whitehurst, Darvish, Mann, Whitehurst II, or Ausiello, can be construed to supplement the deficiencies of Greenberg and Gordon. None of these references in any combination remotely suggest means or structures for disintegrating a reservoir cap by electrothermal ablation.

For the foregoing reasons, no *prima facie* case of obviousness has been established. The rejections must be withdrawn.

**Conclusions**

The claims as amended are patentable over the prior art of record. Prompt allowance of each of the pending claims is therefore respectfully solicited.

Respectfully submitted,



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